UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th Street, Suite 3200
HELENA, MONTANA 59626

Ref: 8MO

June 25, 2008

Mr. Bryan Donner, Planning Team Leader,
Tally Lake Ranger District
Flathead National Forest
650 Wolfpack Way
Kalispell, Montana 59901

Re: CEQ 20080192; Sheppard Creek Post-Fire Project
Draft Environmental Impact Statement

Dear Mr. Donner:

The Environmental Protection Agency (EPA) Region VIII Montana Office has reviewed the Draft Environmental Impact Statement (DEIS) for the Sheppard Creek Post-Fire Project in accordance with EPA responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. 4231 and Section 309 of the Clean Air Act. Section 309 of the Clean Air Act directs EPA to review and comment in writing on the environmental impacts of any major Federal agency action. EPA's comments include a rating of both the environmental impact of the proposed action and the adequacy of the NEPA document.

The EPA is not opposed to the purpose and need of the Sheppard Creek Post-Fire Project to salvage burned timber and recover merchantable wood fiber to support local communities and contribute to the long term yield of forest products. Although we concur with the statement in the DEIS that Alternative A, No Action, would be environmentally preferred. We believe it is important to consider the cumulative effects of salvage harvests after a wildfire, since watersheds are often degraded by wildfires (high water yields, and increased sediment production), and therefore, are sensitive to further degradation from salvage logging operations. Accordingly, we believe salvage harvests should be conducted in a manner that poses low risk to water quality and soils, with use of timber harvest methods that minimize ground disturbance and erosion potential; minimize new road construction, and also include watershed rehabilitation activities such as road BMP upgrades and road drainage improvements, road obliteration, revegetation, stream and bank stabilization, and other watershed restoration activities along with harvests. We are pleased that many less ground disturbing harvest methods such as helicopter and skyline cable logging and logging during winter on snow and/or frozen ground are proposed with the Sheppard Creek Post-Fire Project.

Among the action alternatives, we consider Alternative C to be environmentally preferred, since Alternative C includes the least amount on road construction (2.9 miles of new temporary road and 6.6 miles of road over historic road templates); least amount of more disturbing summer tractor harvest (319 acres); least amount of sediment production; avoids logging on high risk soil areas; and appears to involve less impact to habitat of the threatened Canada lynx. Alternative C also appears

to have the highest present net value among the action alternatives.

We have greater environmental concerns with action Alternatives B and D. Alternative B includes the most road construction (9.6 miles of new temporary road and 17.3 miles of road over historic templates); 841 acres of summer tractor harvest, and 159 acres of harvest on high risk soils. Alternative D includes 3.2 miles of new temporary road and 8.5 miles of road over historic templates; the greatest number of harvest acres, including 671 acres of summer tractor harvest and 609 acres of harvest on high risk soils, and 521 acres of harvest within Riparian Habitat Conservation Areas (RHCAs).

We are particularly concerned about the Alternative D riparian harvests, the majority of which are proposed adjacent to Sheppard Creek and its tributaries. Sheppard Creek is listed by the State of Montana under Section 303(d) of the Clean Water Act as water quality impaired, with riparian grazing, silviculture harvesting and forest roads listed among the probable sources of impairment. The DEIS states that the proposed riparian harvests would reduce recruitment of woody material to Sheppard Creek, reducing channel stability, and that it is very likely that the removal of future woody material would limit the long term recovery of stream and riparian conditions in Sheppard Creek. The DEIS also states that Alternative D would exacerbate existing signs of scouring and poor habitat conditions and trigger additional bank erosion, and large woody material for stream recruitment may be lost for as long as 200 years. The DEIS further states that loss of canopy cover and overhead shade with riparian harvests will likely result in more lush growth of forbs and grasses near stream channels, increasing attractiveness of the riparian areas to livestock on the Swaney grazing allotment. Alternative D riparian harvests would remove dense woody growth and debris that currently limits cattle access to streams, increasing livestock accessibility to streams, and likely resulting in increased streambank trampling and other grazing related adverse impacts to Sheppard Creek and tributaries (Listle Creek, and Dunsire Creek).

We are concerned that the riparian harvests proposed in Alternative D may not be consistent with water quality improvement and restoration of full support of the beneficial uses of Sheppard Creek, which are Clean Water Act goals. We are opposed to activities that would limit the restoration of water quality and full support of beneficial water uses in Sheppard Creek.

Also, it did not appear to us that the INFISH RHCA buffer protections and buffer widths and "special treatment zones" identified in the DEIS to protect streams and wetlands were clearly described for all action alternatives. We recommend that the RHCA buffers and the "special treatment zones" intended to protect streams and wetlands be more clearly described for all the action alternatives in the FEIS. We support use of adequate RHCA buffers and retention of trees in RHCAs to provide adequate woody debris recruitment, canopy cover, and bank and channel stability for streams. We believe the FEIS should show how INFISH riparian management objectives can be met with proposed riparian harvests. We also suggest that the resource management and environmental trade-offs associated with beetle infestations, proposed treatments, and riparian and water quality/aquatic habitat impacts be more thoroughly compared and discussed.

The DEIS states that all three action alternatives have potential to produce sediment in the Sheppard Creek subwatershed, although sediment production from proposed activities are small in comparison to sediment resulting from post-fire conditions on the burned landscape. It is EPA's

policy that proposed activities in the drainages of 303(d) listed streams should not cause further degradation of water quality, and should be consistent with the State's Total Maximum Daily Loads (TMDLs) and Water Quality Plans intended to improve water quality and restore full support for beneficial uses. This means that if management activities are proposed that may generate additional pollutant contributions to impaired waters, watershed restoration activities should also be included that would reduce existing sources of pollution to offset or compensate for pollutants generated during project activities. Only by reducing existing pollutant sources can additional pollutant contributions occur within a framework of overall reduction of pollutants to promote long-term water quality improvement and restoration of full support for beneficial uses. While we recognize that water quality effects from the proposed salvage logging and road construction activities are small in comparison to the wildfire, this does not alter the fact that salvage logging will increase sediment transport to Sheppard Creek and its tributaries. The Sheppard Creek project area is within the Flathead-Stillwater TMDL Planning Area, with TMDLs due in 2012.

The DEIS indicates that BMPs on haul roads will be improved, eight culverts would be replaced in the Sheppard Creek subwatershed in 2008 through the BAER program, and that 18.6 miles of road are scheduled for decommissioning in the next one to three years, and that road and culvert upgrades and road decommissioning would improve overall watershed condition in the long-term. It is not clear, however, if these proposed watershed restoration activities would fully compensate for the sediment production from proposed salvage logging and road construction with the desired margin of safety that would result in overall reductions in pollution consistent with long-term water quality improvement and restoration of full support of beneficial uses, particularly for Alternatives B and D that will produce more sediment.

We believe the FEIS should include additional analysis that more clearly compares and discusses estimated sediment production from proposed road construction and logging activities vs. estimated sediment reduction likely to result from the proposed watershed restoration activities, so that the FEIS more clearly demonstrates that salvage logging and temporary road construction can occur without further degrading impaired waters. It should be shown that the watershed restoration activities will more than compensate for sediment contributions from the salvage logging and road work in the final selected alternative.

The DEIS refers to a "dense road network" in the Sheppard Creek drainage, so we suggest that a reduction in road density, particularly road stream crossings, would provide additional opportunities for compensatory watershed restoration. We encourage the Flathead National Forest to evaluate opportunities for additional watershed restoration activities such as additional decommissioning of roads that contribute sediment to Sheppard Creek or other activities to further reduce existing sediment contributions (e.g., stabilization of eroding streambanks or other erosive areas). This is needed to more clearly demonstrate that Sheppard Creek will be on a track of water quality improvement and restoration of full support of beneficial uses despite the sediment contributions from proposed salvage logging activities and road construction.

We also suggest that any additional BAER or other projects that may have been conducted or which are planned to protect the Sheppard Creek watershed be discussed in regard to reducing existing sediment production (e.g., aerial seeding, placing straw wattles, fiber mats and straw on severely burned areas to reduce erosion, cleaning road ditches, culvert inlets and catch basins,

constructing diversion dips on roads, and upgrading culverts). Any rehabilitation work to address watershed effects of fire suppression activities may also be relevant to show that the sediment reductions associated with the restoration actions will exceed the sediment production from salvage harvests and road construction (i.e., recontouring and revegetating firelines, skidding felled trees from firelines, seeding disturbed areas, installation of waterbars, etc.).

In addition, we encourage the Forest Service to coordinate with MDEQ TMDL staff to assure that the MDEQ considers the proposed Sheppard Creek Post-Fire Project to be consistent with MDEQ's development TMDLs and Water Quality Plans in the Sheppard Creek drainage (contact Mark Kelley, Robert Ray, or Jim Bond of the MDEQ in Helena at 444-3508, 444-5319, 444-3548, respectively). It is important that the proposed Sheppard Creek Post-Fire Project be consistent with TMDLs and Water Quality Plans currently being developed for impaired waters in the project area by the Montana Dept. of Environmental Quality (MDEQ).

Finally we want to state that we are pleased that much tree planting and "interplanting" is proposed. We encourage the Forest Service to consider as much seeding and revegetation on burned areas where vegetative recovery is slow as possible. Rapid establishment of vegetation and ground cover in severely burned areas is necessary to reduce erosion and sediment transport. Seeding and erosion control on steeper slopes and establishment of woody vegetation along incised perennial, intermittent and ephemeral stream bottoms with high burn severity is particularly encouraged.

The EPA's further discussion and more detailed questions, comments, and concerns regarding the analysis, documentation, or potential environmental impacts of the Sheppard Creek Post-Fire Project are included in the enclosure with this letter. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the Sheppard Creek Post-Fire Project DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). A copy of EPA's rating criteria is attached.

The EPA appreciates the opportunity to review the project area in the field on June 13, and to review and comment on the DEIS. If we may provide further explanation of our concerns please contact Mr. Steve Potts of my staff in Helena at (406) 457-5022 or in Missoula at 406-329-3313. Thank you for your consideration.

Sincerely,

/s/ John F. Wardell
Director
Montana Office

Enclosures
cc: Larry Svoboda/Julia Johnson, EPA 8EPR-N, Denver
Robert Ray/Mark Kelley, MDEQ, Helena

EPA COMMENTS ON SHEPPARD CREEK POST-FIRE PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT

Brief Project Overview:

The Flathead National Forest (FNF), Tally Lake Ranger District, has developed the Sheppard Creek Post-Fire Project to analyze effects of proposed salvage of timber burned in the Brush Creek wildfire in 2007. The purpose and need is to recover merchantable wood fiber to support local communities and contribute to the long term yield of forest products. The area of approximately 30,000 acres is located 20 air miles west of Whitefish, Montana, and has 24,700 acres of Flathead National Forest land, with remaining lands administered by the Kootenai National Forest, Plum Creek Timber Company, and a small amount of other private land. Issues influencing the development of alternatives include helicopter yarding, old growth and recruitment old growth habitat, Canada lynx habitat, timber salvage in reserved areas, water quality, stream channel stability, and bark beetles. Four alternatives were evaluated. Alternative A is the no action alternative in which no activities would be carried out, and which serves as a baseline for comparison with the action alternatives.

Alternative B is the proposed action including 6346 acres of commercial timber salvage (76 acres of cable, 706 acres of helicopter, 2079 acres of skyline, 3209 acres of tractor, and 276 acres of tractor/skyline swing yarding, and 2644 acre of winter logging, and 59,065 CCF), along with 1844 acres of tree planting, and 2337 acres of interplanting. About 17.3 miles of temporary roads would be constructed over historic road templates, and 9.6 miles of new temporary roads would be built. Most timber salvage activities would be conducted in the first year after the Record of Decision is signed with other activities such as tree planting taking longer.

Alternative C proposes no helicopter yarding; eliminates logging in stands that may be old growth or "recruitment" old growth; reduces the number of acres harvested and amount of road construction through lynx habitat; reduces road construction through RHCAs and moist areas; and reduces the number of culverts installed. This alternative includes 3902 acres of commercial timber salvage (30 acres of cable, 0 acres of helicopter, 1464 acres of skyline, 2271 acres of tractor, and 137 acres of tractor/skyline swing yarding and 2089 acre of winter logging, and 37,353 CCF), along with 1198 acres of tree planting, and 1654 acres of interplanting. About 6.6 miles of temporary road would be constructed over historic road templates, and 2.9 miles of new temporary roads would be built.

Alternative D involves additional areas of timber salvage harvest being proposed to manage for possible epidemic levels of Douglas-fir and spruce bark beetle, including some areas within RHCAs. This alternative also retains helicopter logging and reduces the number of temporary roads being built to access units, and includes 7465 acres of commercial timber salvage (209 acres of cable, 1464 acres of helicopter, 1977 acres of skyline, 3522 acres of tractor, and 293 acres of tractor/skyline swing yarding and 3144 acre of winter logging, and 69,812 CCF), along with 2159 acres of tree planting, and 2978 acres of interplanting. About 8.5 miles of road would be constructed over historic road templates, and 3.2 miles of new temporary roads would be built.

The Forest Service has not identified an agency preferred alternative, and identifies Alternative A as the environmentally preferred alternative.

Comments:

Alternatives

1) We appreciate the narrative descriptions of alternatives, including the colored alternatives maps and the tables identifying harvest units, snag and down wood prescriptions, and road construction, as well as alternatives comparison matrices (Tables 2-10 and 2-11); discussion of features common to all action alternatives (i.e., including mitigation measures); and the BMPs in Appendix C. This information facilitates improved project understanding and evaluation of alternatives, and helps provide a clearer basis of choice among options for the decisionmaker and the public in accordance with the goals of NEPA.

2) The description of Alternative C in the DEIS Summary (page S-4) says 6.6 miles of temporary road would be constructed over historic road templates and 2.9 miles of new temporary road would be built, whereas the description of Alternative C in Chapter 2 of the DEIS (pages 2-21, 2-22) says the reverse (i.e., 2.9 miles of temporary road would be constructed over historic road templates and 6.6 miles of new temporary road would be built). Table 2-5 (page 2-22) suggests that the description of Alternative C in the Summary Chapter is correct. There also appear to be discrepancies in the tree planting and interplanting acreage figures in the descriptions of Alternative D in the Summary Chapter and Chapter 2. We recommend that the descriptions of Alternatives be checked so that they are consistent throughout the EIS.

3) We agree that Alternative A, No Action, would be environmentally preferred. In regard to the action alternatives we consider Alternative C to be environmentally preferred since it includes the least amount on road construction (2.9 miles of new temporary road and 6.6 miles of road over historic road templates); least amount of more disturbing summer tractor harvest (319 acres); avoids logging on high risk soil areas; and does not involve any riparian harvest. We also note that Alternative C also appears to have the highest present net value among the action alternatives (page 3-333).

   We have greater environmental concerns with Alternatives B and D. Alternative B includes the most road construction (9.6 miles of new temporary road and 17.3 miles of road over historic templates); 841 acres of summer tractor harvest, and 159 acres of harvest on high risk soils. Alternative D includes 3.2 miles of new temporary road and 8.5 miles of road over historic templates; the greatest number of harvest acres, including 671 acres of summer tractor harvest, and 609 acres of harvest on high risk soils, and lowest present net value. Also, we have concerns about Alternative D consistency with INFISH, since it proposes to harvest 521 acres of beetle infested Douglas fir and Spruce trees within RHCAs. Alternatives B and D are estimated to produce 67.6 and 52.7 more tons of sediment respectively, than Alternative C (Table 3-44, page 3-142).

   We are particularly concerned that the majority of the Alternative D riparian harvests are proposed adjacent to water quality impaired and 303(d) listed Sheppard Creek and its tributaries (page 3-170). The DEIS states that the riparian harvests would reduce recruitment of woody material to Sheppard Creek, reducing channel stability, and that it is very likely

that the removal of future woody material would limit the long term recovery of stream and riparian conditions in Sheppard Creek (page 3-142). The DEIS states that large woody material for stream recruitment may be lost for as long as 200 years (page 3-171), adding to the existing adverse cumulative impacts from the road system and past timber harvest. Alternative D would exacerbate existing signs of scouring and poor habitat conditions, and trigger additional bank erosion (page 3-167).

The DEIS also states that loss of canopy cover and overhead shade with Alternative D riparian harvests will likely result in more lush growth of forbs and grasses near stream channels, increasing attractiveness of the riparian areas to livestock on the Swaney grazing allotment. The DEIS further states that loss of the dense woody growth and woody debris, that currently impedes livestock access to streams along lower Sheppard Creek, Listle Creek, and Dunsire Creek, will allow increased livestock accessibility to streams and result in increased streambank trampling (page 3-171). The Alternative D riparian harvests are, therefore, likely to promote increases in grazing related impacts to Sheppard Creek and its tributaries.

It appears to us that the riparian harvests proposed in Alternative D are likely to be inconsistent with water quality improvement and restoration of full support of the beneficial uses of Sheppard Creek. Accordingly, we are concerned that the Alternative D riparian harvests may not be consistent with TMDL and Clean Water Act goals to restore full support of beneficial uses to Sheppard Creek. We are opposed to inclusion of riparian harvests in the preferred alternative that would limit the restoration of water quality and full support of beneficial water uses in Sheppard Creek.

Water Resources and Soils

4) Watersheds with moderate to severe wildfire effects (already high water yields, and increased sediment production caused by the fire) are often sensitive to further degradation from salvage logging operations. Accordingly, we believe there is a need for careful consideration of the cumulative effects of salvage harvests after a wildfire. Salvage harvests should be conducted in a manner that poses low risk to water quality and soils, with use of timber harvest methods that minimize ground disturbance and erosion potential; minimize new road construction; and also include watershed rehabilitation activities such as road BMP upgrades and road drainage improvements, road obliteration, revegetation, stream and bank stabilization, and other watershed restoration activities along with harvests. Watershed restoration activities are particularly important in drainages of 303(d) listed streams to help offset or compensate for sediment production associated with timber harvest and road construction activities, and thus, avoid further potential for degradation of 303(d) listed waters. EPA particularly recommends road BMP and drainage improvements and culvert replacements on forest roads, since roads are often the most common cause of adverse water quality impacts in forests.

We are pleased that many less ground disturbing harvest methods such as helicopter and skyline cable logging and logging during winter on snow and/or frozen ground are proposed with the Sheppard Creek Post-Fire Project, and that summer ground based harvest would be

restricted to units with slopes less than 25% and with low burn severity (page 2-8). Although we are concerned that Alternatives B and D appear to have high levels of road construction/reconstruction in the Sheppard Creek watershed (i.e., 27.2 miles and 11.5 miles, respectively, Table 3-43), and as stated in the DEIS, "construction of temporary roads has the highest potential to affect fish habitat through sediment delivery" (page 3-165).

5) Table 3-51 (page 3-190) identifies high risk soil areas for logging. Is the extent of fire area with severely burned soils fully known? Are the 161 acres of Alternative B harvest and 611 Alternative D harvest in high risk soils areas shown in Table 3-51 the full extent of proposed harvests in areas with severely burned soils? It would be of interest to include a burn severity map showing the locations of high risk soils areas that burned at high severity to allow improved understanding of the location of harvest units and roads in relation to areas of high risk soils.

   Are there any areas with potential for debris flows or areas of known mass failure in the Sheppard Creek project area? If so, we recommend that such areas with potential for debris flows or mass failure be avoided, and use of less disturbing logging methods with salvage harvests in areas with more severely burned soils and greater potential for erosion (e.g., use of helicopter, skyline or winter logging). We also recommend that locations of unstable and sensitive or highly erosive areas be flagged on the ground so that contractors can avoid them.

6) We are concerned about additional soil degradation and sediment production associated with proposed Alternative B and D harvests in high risk soils. Can the proposed harvest of 161 acres and 611 acres in high risk soils areas with Alternatives B and D, respectively (Table 3-51), be carried out in a manner that meets the Regional soil quality standard? Will the proposed snag and down wood management and soil protection measures allow the Regional soil quality standard to be met in all areas?

   We are pleased that it is stated that summer tractor logging on more severely burned soils will not occur (page 2-8), although it is unclear if this statement is consistent with the harvest of 161 acres and 611 acres in high risk soils areas proposed with Alternatives B and D, respectively. We are pleased that detrimental soil disturbance will be measured in a sample of units that are close to exceeding the 15 percent standard (page E-2). It is important that there be adequate on-the-ground soils monitoring information and analysis to document that Regional soil quality guidelines can be met on all units. We recommend that all harvest units that occur on high risk soils be considered for soils monitoring.

7) The DEIS appears to respond to many of the post-fire timber salvage issues raised in the 1995 Beschta Report such as soil erosion; leaving adequate standing dead and live trees for ecological purposes; road building; reseeding and replanting concerns; structural post-fire restoration; post-fire management, etc, (page 3-188), in various sections of the document. However, it is often helpful to consolidate responses to these issues in a separate section or appendix, to more clearly document how the post-fire issues raised by Beschta et.al. are addressed. We suggest consideration of an appendix that consolidates responses to the Beschta et.al. post-fire issues.

The DEIS correctly states that Sheppard Creek is on Montana's Clean Water Act Section 303(d) list of impaired waters (page 3-133). The DEIS and the MDEQ 303(d) website (http://cwaic.mt.gov/Default.aspx) indicates that probable causes of Sheppard Creek impairment are alteration of streamside vegetation, excess nutrients (nitrogen and phosphorus) and sediment/siltation, with probable sources of impairment being riparian grazing, silviculture harvesting and forest roads. All three action alternatives are stated to have potential to produce sediment in the Sheppard Creek subwatershed (page 3-141), with Table 3-43 summarizing activities proposed in the Sheppard Creek subwatershed, and Table 3-44 (page 3-142) showing estimated sediment production among the action alternatives (i.e.,

Estimated sediment production from proposed activities are stated to be small in comparison to sediment resulting from post-fire conditions on the burned landscape (page 3-141), but it is also stated that it is very likely that the removal of future woody material would limit the long term recovery of stream and riparian conditions in Sheppard Creek (page 3-142); and that Alternative D would exacerbate existing signs of scouring and poor habitat conditions, and trigger additional bank erosion (page 3-167). As noted above, Alternatives B and D are estimated to produce 67.6 and 52.7 more tons of sediment, respectively, than Alternative C, (Table 3-44).

It is EPA's policy that proposed activities in the drainages of 303(d) listed streams should not cause further degradation of water quality, and should be consistent with the State's Total Maximum Daily Loads (TMDLs) and Water Quality Plans that are intended to improve water quality and restore full support for beneficial uses. This means that if management activities are proposed that may generate additional pollutant contributions to impaired waters, watershed restoration activities should also be included that would reduce existing sources of pollution to offset or compensate for pollutants generated during project activities. Only by reducing existing pollutant sources can additional pollutant contributions occur within a framework of overall reduction of pollutants to promote long-term water quality improvement and restoration of full support for beneficial uses in the impaired waters.

Recognizing uncertainties and desiring a margin of safety, we believe compensation should more than offset pollutants generated, resulting in overall reductions in pollution consistent with long-term water quality improvement and restoration of full support of beneficial uses. Watershed restoration activities that compensate for pollutant production during management activities in watersheds of 303(d) listed streams should also be implemented within a reasonable period of time in relation to pollutant producing activities (e.g., 5 years).

The DEIS indicates that BMPs would be improved on haul roads, and eight culverts would be replaced in the Sheppard Creek subwatershed in 2008 through the BAER program (3-142), and that 18.6 miles of road are scheduled for decommissioning in the next one to three years (pages 3-143), and that road improvements and culvert upgrades and road decommissioning would improve overall watershed condition in the long-term.

It is not clear, however, if these proposed watershed restoration activities would fully compensate for the sediment production from proposed salvage logging and road construction with the desired margin of safety that would result in overall reductions in

pollution consistent with long-term water quality improvement and restoration of full support of beneficial uses for all alternatives.

Table 3-44 (page 3-142) shows estimates for potential sediment production from proposed road work and logging activities (Alternatives B, C and D, are estimated to produce 154.8 tons, 87.2 tons, and 139.9 tons, respectively). While we recognize that water quality effects from the wildfire are greater than that likely to occur from proposed salvage logging activities, this does not alter the fact that salvage logging will result in increased sediment transport to Sheppard Creek and its tributaries. Alternative D has the highest potential to exacerbate conditions in Sheppard Creek due to proposed riparian harvest (page 3-142).

We believe the FEIS should include additional analysis that more clearly compares and discusses estimated sediment production from proposed road construction and logging activities vs. estimated sediment reduction likely to result from the proposed watershed restoration activities, so that the FEIS more clearly demonstrates that salvage logging and temporary road construction can occur without further degrading impaired waters. It should be shown that the watershed restoration activities will more than compensate for sediment contributions from the salvage logging and road work.

The DEIS refers to a "dense road network" in the Sheppard Creek drainage (page 3-133), and that roads have impacted conditions in Sheppard Creek (page 3-142), so a reduction in road density and road stream crossings would likely improve water quality over the long-term. It would be of interest to identify the existing road density and road stream crossing density in the project area. EPA very much supports road decommissioning and reductions in road density and road stream crossing density, since increasing road density, especially road stream crossing density, has been inversely correlated with aquatic health in many areas. The U.S. Fish & Wildlife Service in its 1998 Bull Trout Interim Conservation Guidance identified the importance of road densities for bull trout conservation, showing general exclusion of bull trout in watersheds with high road densities (e.g., over 1.7 mi/mi^2 of roads), and showing bull trout strongholds to have low road densities (e.g., an average 0.45 mi/mi2 of roads). In addition, lower road densities are also often associated with improved wildlife habitat and security.

Since it appears that Alternatives B and D have greater potential to contribute sediment to Sheppard Creek, these alternatives may require additional watershed restoration to achieve appropriate reductions in existing sediment sources. We encourage consideration of including additional watershed restoration activities such as additional road improvements or decommissioning of roads that contribute sediment to Sheppard Creek or other activities that reduce existing sediment contributions (e.g., stabilization of eroding streambanks or other erosive areas) to more clearly demonstrate that Sheppard Creek will be on a track of water quality improvement and restoration of full support of beneficial uses despite the sediment contributions from proposed salvage logging activities and road construction. Additional road decommissioning in the Sheppard Creek project area may reduce the "dense road network" in the area. Closures of roads near streams with many stream crossings are more likely to have water quality and fisheries benefits than closure/decommissioning of roads on upper slopes and ridges.

We also suggest that any additional BAER or other projects that may have been conducted or which are planned to protect the Sheppard Creek watershed be discussed in regard to reducing existing sediment production (e.g., aerial seeding, placing straw wattles, fiber mats and straw on severely burned areas to reduce erosion, cleaning road ditches, culvert inlets and catch basins, constructing diversion dips on roads, and upgrading culverts). Also rehabilitation work to address watershed effects of fire suppression activities may be relevant to show that the sediment reductions associated with the post-fire restoration actions will exceed the sediment production from salvage harvests and road construction (i.e., recontouring and revegetating firelines, skidding felled trees from firelines, seeding disturbed areas, installation of waterbars, etc.).

It would also be helpful if an anticipated schedule of implementation for project activities, including watershed improvement activities, could be provided to allow improved understanding of when watershed restoration activities are likely to be implemented in relation to timber harvest and road construction activities. This would allow improved understanding of the time frame for sediment increases from vegetative treatments and road construction vs. sediment reductions from watershed restoration, and thus, improved understanding of temporal impacts. If funding to implement needed watershed restoration is limited, we suggest listing restoration activities which have assured funding (and which can be implemented on a timely basis), and restoration activities which need additional appropriated funds (and may be implemented at a later date), separately. If watershed restoration work will be committed to with the project decision that should be stated.

We also encourage the Forest Service to consult MDEQ's TMDL Program staff to assure that the MDEQ considers the proposed Sheppard Creek Post-Fire Project to be consistent with MDEQ's development TMDLs and Water Quality Plans in the Sheppard Creek drainage (contact Mark Kelley, Robert Ray, or Jim Bond of the MDEQ in Helena at 444-3508, 444-5319, 444-3548, respectively). It is important that the proposed Sheppard Creek Post-Fire Project be consistent with Total Maximum Daily Loads (TMDLs) and Water Quality Plans being developed for impaired waters in the project area by the MDEQ.

8) EPA considers the protection, improvement, and restoration of wetlands and riparian areas to be a high priority. Wetlands and riparian areas increase landscape and species diversity, support many species of western wildlife, and are critical to the protection of designated water uses. Wetlands in particular have experienced severe cumulative losses nationally. Potential impacts on wetlands include: water quality, habitat for aquatic and terrestrial life, flood storage, ground water recharge and discharge, sources of primary production, and recreation and aesthetics.

   Executive Order 11990 requires that all Federal Agencies protect wetlands. In addition national wetlands policy has established an interim goal of **No Overall Net Loss of the Nation's remaining wetlands**, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base (see "Presidential Wetland Policy of 1993" at website, http://www.usace.army.mil/inet/functions/cw/cecwo/reg/aug93wet.htm). Wetland impacts should be avoided, and then minimized, to the maximum extent practicable, and then

unavoidable impacts should be compensated for through wetland restoration, creation, or enhancement.

EPA evaluates land management activities proposed within the Interior Columbia Basin for consistency with the provisions of the Interagency Memorandum of Understanding between the Forest Service, BLM, EPA, USFWS, and NMFS for Forest Service implementation of the Interior Columbia Basin Strategy on National Forest lands (referred to as the ICB Strategy, see http://www.icbemp.gov/html/icbstrat.pdf , and http://www.icbemp.gov/html/aqripfrm7804.pdf).

Riparian Habitat Conservation Areas (RHCAs) are an important management element in the ICB Strategy to maintain and restore the health of watersheds, riparian, and aquatic resources to sustain aquatic and terrestrial species and provide water of sufficient quality and quantity to support beneficial uses. It is important that proposed activities be consistent with the riparian management objectives described in the ICB Strategy, which include:

* Achieve physical integrity of aquatic ecosystems;
* Provide an amount and distribution of woody debris sufficient to sustain physical and biological complexity;
* Provide adequate summer and winter thermal regulation;
* Provide appropriate amounts and distributions of source habitats for riparian- or wetland-dependent species; and
* Restore or maintain water quality and hydrologic processes.
* Restore or maintain naturally functioning riparian vegetation communities.

We are pleased that the alternatives maps in Chapter 2 show RHCAs for Sheppard Creek and some other streams within the project area. The DEIS states that typically RHCAs are 300 feet from either side of fish habitat, 150 feet from perennial streams and 50 feet from intermittent/ephemeral streams (page 3-167), and that no harvest activity is proposed in Alternatives B and C in RHCAs (page 3-167), and that ground-based equipment tractor use would be excluded with RHCAs (pages 3-186, 3-187). However, there is a note at the bottom of page 3-166 that mentions proposed harvest within RHCAs, and it is stated in Features Common to All Alternatives that "standing and downed trees within 75 feet of wetlands (not streams) would not be removed for bark beetle concerns or other reasons" (page 2-8), rather than just referring to the INFISH RHCA buffers. This leaves the reader with some confusion regarding the extent of no harvest RHCA buffer protection and buffer widths that would be applied within the project area under all alternatives.

We understand that Alternative D includes harvest of beetle infested Douglas fir and spruce trees within riparian areas, but it is stated that "special treatment zones" would ensure protection of soil, water, wildlife and other resources" (page 2-23). It would be helpful to public understanding to more clearly describe the specific INFISH and RHCA buffer protections and buffer widths and "special treatment zones" that are proposed for perennial and intermittent streams and wetlands for all action alternatives. The FEIS should also show how INFISH riparian management objectives can be met with proposed riparian harvests.

We also suggest that the resource management and environmental trade-offs associated with beetle infestations, treatments, and riparian and water quality/aquatic habitat impacts be more thoroughly compared and discussed.

We recommend no timber harvest, temporary road construction, or operation of heavy equipment in wetlands. We also recommend no harvest and use of heavy equipment within riparian buffer areas, although there may sometimes be reasons for exceptions, although site-specific analysis should still show that riparian management objectives can be achieved even if there are exceptions to standard buffer widths, and as stated above there should be no further degradation of 303(d) listed Sheppard Creek. We also recommend that treatment units be reviewed in the field to identify the presence of wetlands, and wetland and riparian buffer boundaries be identified on the Sale Area Map and flagged in the field so that timber contractors will be able to avoid them.

9) Major fires such as the Brush Creek fire can result in landscape hydrologic changes including increased water yield and increased availability of ground water. It may be possible that some stream segments currently classified as "intermittent" may flow more often or become permanent, and that stream channels may become more defined due to increased runoff. Additionally, it is likely that the increase in available water will result in emergence of new springs and seeps in the project area. We therefore encourage the Forest Service to visually monitor the surface hydrology in the project area throughout the project period, and allow for any modifications to the project that would be necessary to protect water quality should significant hydrologic change be detected

10) As you know road construction is one of the more significant aspects of a timber harvest project in terms of environmental effects, even temporary roads, since sediment from road construction, and from erosion of roads, particularly erosion of poorly maintained roads with inadequate road drainage, is often a major cause of adverse water quality impacts in forests. Minimization of new road construction and careful siting and design of roads is important to reduce adverse effects associated with roads.

This project includes a significant amount of temporary road construction, both new roads and roads constructed over historic road templates. Alternative B includes the most road construction (9.6 miles of new temporary road and 17.3 miles of road over historic templates), while Alternative C includes the least road construction (2.9 miles of new temporary road and 6.6 miles of road over historic templates). We are pleased that temporary roads will be revegetated after use (page 2-18), since it is important to reclaim temporary roads after harvest is completed (i.e., recontour to original slope, restore and stabilize road drainage crossings, install waterbars, re-seed with grass, scatter woody debris over the surface, etc,). Helicopter landings should also be similarly reclaimed after harvest is completed.

The DEIS states that 3.5 miles of temporary road construction with Alternative B has a high potential for sediment delivery (page 3-167). We believe it is problematic to construct roads with high potential for sediment delivery in the watershed of a 303(d) listed stream.

It is also important that all haul roads be properly maintained with BMP implementation to minimize erosion and sediment production from roads (e.g., improving road drainage, installing and replacing ditch relief culverts, graveling portions of roads, stabilizing cut and fill slopes, etc.). We appreciate the stated BMP implementation for all haul routes (page 3-167), and disclosure of road BMPs in Appendix C. For your information, EPA's general recommendations regarding roads are to:

* minimize road construction and reduce road density as much as possible to reduce potential adverse effects to watersheds;

* locate roads away from streams and riparian areas as much as possible;

* locate roads away from steep slopes or erosive soils;

* minimize the number of road stream crossings;

* stabilize cut and fill slopes;

* provide for adequate road drainage and control of surface erosion with measures such as adequate numbers of waterbars, maintaining crowns on roads, adequate numbers of rolling dips and ditch relief culverts to promote drainage off roads avoid drainage or along roads and avoid interception and routing sediment to streams;

* consider road effects on stream structure and seasonal and spawning habitats;

* allow for adequate large woody debris recruitment to streams and riparian buffers near streams;

* properly size culverts to handle flood events, pass bedload and woody debris, and reduce potential for washout;

* replace undersized culverts and adjust culverts which are not properly aligned or which present fish passage problems and/or serve as barriers to fish migration;

* use bridges or open bottom culverts that simulate stream grade and substrate and that provide adequate capacity for flood flows, bedload and woody debris where needed to minimize adverse fisheries effects of road stream crossings.

We also encourage conduct of inspections and evaluations to identify conditions on roads and other anthropogenic sediment sources in the watersheds in the project area that may cause or contribute to sediment delivery and stream impairment, and to include activities in the project to correct as many of these conditions and sources as possible.

Blading of unpaved roads in a manner that contributes to road erosion and sediment transport to streams and wetlands should be avoided. It is important that management direction

assures that road maintenance (e.g., blading) be focused on reducing road surface erosion and sediment delivery from roads to area streams. Practices of expediently sidecasting graded material over the shoulder and widening shoulders and snow plowing can have adverse effects upon streams, wetlands, and riparian areas that are adjacent to roads. Road use during spring breakup conditions should also be avoided. Snow plowing of roads later in winter for log haul should also be avoided to limit runoff created road ruts during late winter thaws that increase road erosion (i.e., ruts channel road runoff along roads).

Forest Service Region 1 provides training for operators of road graders regarding conduct of road maintenance in a manner that protects streams and wetlands, (i.e., Gravel Roads Back to the Basics). If there are road maintenance needs on unpaved roads adjacent to streams and wetlands we encourage utilization of such training (contact Donna Sheehy, FS R1 Transportation Management Engineer, at 406-329-3312).

We also note that there are training videos available from the Forest Service San Dimas Technology and Development Center for use by the Forest Service and its contractors (e.g., "Forest Roads and the Environment"-an overview of how maintenance can affect watershed condition and fish habitat; "Reading the Traveled Way" -how road conditions create problems and how to identify effective treatments; "Reading Beyond the Traveled Way"-explains considerations of roads vs. natural landscape functions and how to design maintenance to minimize road impacts; "Smoothing and Reshaping the Traveled Way"-step by step process for smoothing and reshaping a road while maintaining crowns and other road slopes; and "Maintaining the Ditch and Surface Cross Drains"-instructions for constructing and maintaining ditches, culverts and surface cross drains).

11) Monitoring should be an integral part of any management decision. The EPA endorses the concept of adaptive management whereby effects of implementation activities are determined through monitoring (i.e., ecological and environmental effects). It is through the iterative process of setting goals and objectives, planning and carrying out projects, monitoring impacts of projects, and feeding back monitoring results to managers so they can make needed adjustments, that adaptive management works. In situations where impacts are uncertain, monitoring programs allow identification of impacts, so they may be mitigated. Monitoring and feedback of monitoring results to managers is critical to the success of a land management plan.

The EPA particularly believes that water quality/aquatics monitoring is a necessary and crucial element in identifying and understanding the consequences of one's actions, and for determining effectiveness in BMPs in protecting water quality. The achievement of water quality standards for non-point source activities occurs through the implementation of BMPs. Although BMPs are designed to protect water quality, they need to be monitored to verify their effectiveness. If found ineffective, the BMPs need to be revised, and impacts mitigated.

The DEIS states (page 2-34) that monitoring activities specific to the Sheppard Creek project would be conducted, and the proposed monitoring activities are found in Appendix E. Appendix E briefly discusses monitoring of detrimental soil disturbance and sediment production in association with summer salvage harvests and temporary road construction.

Detrimental soil disturbance would be monitored in sample logging units that may be close to exceeding the soil quality standard of 15 percent. Temporary roads and sample logging units would be visually monitored for sediment delivery to streams. Three monitoring stations established on Sheppard Creek in 2007 would be monitored in 2009 and 2010 using the R1AEUI protocol. In addition, vegetation and wildlife habitat and road construction and road maintenance would be monitored.

We are pleased that aquatic monitoring will be carried out on three Sheppard Creek stations. We fully support aquatic monitoring to verify that the project effects will be minimal, as well as to evaluate post-fire induced changes to water quality and aquatic habitat. We note that there may also be PACFISH/INFISH Biological Opinion (PIBO) monitoring sites in the project area that could be used to help evaluate actual project aquatic effects (http://www.fs.fed.us/biology/fishecology/emp/index.html).

While the DEIS indicates that the R1 AEUI monitoring protocols would be used, we often encourage use of aquatic monitoring parameters such as Pfankuch stream channel ratings, riffle stability index, Wolman pebble counts, McNeil sediment cores, stream cross-sections, bank erosion index, and bank profile, suspended and bedload sediments, bull trout population and redd counts, as well as macroinvertebarate and periphyton sampling. For your information we often encourage review of the following monitoring references when developing an aquatic monitoring program.

The Forest Service publication, "Guide to Effective Monitoring of Aquatic and Riparian Resources," RMRS-GTR-121, available at, http://www.fs.fed.us/rm/pubs/rmrs_gtr121.html .

The Forest Service publication, "Testing common stream sampling methods for broad-scale, long-term monitoring," RMRS-GTR-122, available at, http://www.fs.fed.us/rm/pubs/rmrs_gtr122.html .

"Aquatic and Riparian Effectiveness Monitoring Plan for the Northwest Forest Plan," Gordon H. Reeves, David B. Hohler, David P. Larsen, David E. Busch, Kim Kratz, Keith Reynolds, Karl F. Stein, Thomas Atzet, Polly Hays, and Michael Tehan, February 2001. Available on-line at, www.reo.gov/monitoring/watershed/aremp-compile.htm .

Monitoring Guidelines to Evaluate Effects of Forestry Activities in the Pacific Northwest and Alaska; Lee H. McDonald, Alan W. Smart and Robert C. Wissmar; May 1991; EPA/910/9-91-001;

"Aquatic Habitat Indicators and Their Application to Water Quality Objectives Within the Clean Water Act," Stephen B. Bauer and Stephen C. Ralph, 1999, EPA-910-R99-014. (This publication is available on-line at, http://www.pocketwater.com/reports/ahi.pdf)

Western Pilot Study: Field Operations Manual for Wadeable Streams; Environmental Monitoring and Assessment Program Protocols, Edited by David V. Peck, James M. Lazorchak, and Donald J. Klemm, April 2001, available on-line at, http://www.epa.gov/emap/html/pubs/docs/groupdocs/surfwatr/field/ewwsm01.pdf .

Montana DEQ's Water Quality Monitoring and Assessment information can be found on the website,
http://www.deq.state.mt.us/wqinfo/monitoring/Functions.asphttp://www.deq.state.mt.us/

Rapid Bioassessment Protocols for use in Streams and Rivers; James A. Plafkin, May 1989, EPA/444/4-89-001.

"Montana Stream Management Guide; for Landowners, Managers, and Stream Users", Montana Dept. Of Environmental Quality; December 1995.

The Forest Service Region 5 document entitled, "Water Quality Management for Forest System Lands in California: Best Management Practices," September 2000, is a useful reference for BMP development and BMP effectiveness monitoring. It can be found at the website, http://fsweb.r5.fs.fed.us/unit/ec/water/water-best-mgmt.pdf .

"Protocol for Developing Sediment TMDLs" EPA 841-B-99-004, October 1999
http://www.epa.gov/owow/tmdl/sediment/pdf/sediment.pdf

Vegetation

12) We are pleased that planting of trees as well as "interplanting is proposed (page 2.7). While we understand what is meant by tree planting, we are not sure of the distinction between tree planting and "interplanting," and note that "interplanting" was not defined in the Appendix A glossary. We suggest that a definition or description for interplanting be included in the glossary to improve public understanding of this term.

13) We very much support seeding and revegetation in burned areas to establish ground cover and to accelerate reforestation in areas where natural regeneration is slow. As you know plantings can have the beneficial effect of rapidly reestablishing trees, the primary photosynthesis organisms, which produce the major source of carbohydrate and energy, and planted trees more rapidly recover the soil biotic community, and will hasten the return of foraging habitat for wildlife and security cover for big game. Rapid establishment of vegetation on bare ground also reduces erosion.

The EPA supports planting of shrubs and trees in burned riparian areas and along eroding streambanks to accelerate the reestablishment of healthy communities of riparian vegetation. We suggest riparian areas and streambanks along eroding and sensitive reaches of Sheppard Creek and its tributaries be considered for planting with shrubs and trees to provide bank and channel stability, sediment filtration, shade, woody debris recruitment, and other functions. Such plantings in areas near streams or drainage ways can be used to as part of the sediment reductions to offset the sediment contributions from salvage harvests and road construction.

14) The DEIS reader is referred to Exhibit P-15 to understand the criteria used for determining the trees that are expected to die, and thus, be salvaged (i.e., post-fire mortality guidelines). Since salvage of trees that may appear to be alive and healthy in a salvage harvest can be a

controversial issue, we recommend that the post-fire mortality guidelines or at least a summary of them be included in the FEIS, perhaps in the Appendices. This would be helpful to public understanding and provide improved public disclosure under NEPA in regard to which trees would be harvested and/or retained. We note that other post-fire harvest project EIS's have included tree mortality guidelines in EIS appendices to improve public disclosure (e.g., Snow Talon Fire Salvage Project on the Helena National Forest).

We also recommend that the post-fire tree mortality guidelines err on the side of leaving trees that may or may not die, rather than taking trees where mortality is uncertain, in order to recognize the value of remaining live trees in a burned forest ecosystem. We suggest that this policy be specified so that the Forest Service staff carrying out the estimations understand that they should retain borderline trees in regard to their survival, rather than to harvest them. We particularly favor retention of the borderline larger trees of desirable tree species whose overall composition is in decline (e.g., western larch, western white pine, whitebark pine, Ponderosa pine).

15) We appreciate the discussion of Bark Beetles in DEIS Chapter 3 (pages 3-45 to 3-67), although it is our understanding bark beetles are natives of the forest ecosystem and local endemic populations of beetles are a normal component of the ecosystem and beetle interaction with weakened trees is a normal ecosystem function in helping to remove older, weakened, less vigorous trees, and recycle nutrients. It is our understanding that even large populations of bark beetles and resulting tree mortality can be part of normal ecosystem function. We recognize that much of the public perceives epidemic beetle populations as an unhealthy forest environment. However, beetle populations generally experience "boom and bust cycles, and forests have proven resilient, if not dependent on these cycles. A beetle epidemic may also be part of a natural progression to a new successional sere, thus, beetle attack is a natural disturbance and regeneration agent in the ecosystem. Many forests that have undergone "devastating" infestations are now experiencing regeneration without active management before or prior to the epidemic. While we do not oppose management to address bark beetle outbreaks for silvicultural purposes, we think it is important that the public understand that bark beetle outbreaks are a normal component of a forest ecosystem.

We recommend that there be ongoing beetle monitoring to confirm beetle presence and tree mortality and the risk of beetle epidemics before any beetle treatments are finalized. We are pleased that pheromone treatments and trap trees may also be used to address bark beetle outbreaks (page 3-66), since such methods seem to have fewer associated adverse environmental effects. We particularly encourage use of less damaging methods of addressing beetle concerns within riparian areas.

Noxious Weeds

16) Weeds are a great threat to biodiversity and can often out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. As you know activities that disturb soils such as wildfires, timber harvest, and road construction increase potential for weed infestations. We are pleased that measures would be included in the proposed Sheppard Creek project to control spread of noxious weeds during proposed

harvests (i.e., cleaning off-road equipment, revegetating bare ground, spraying roads, etc., page 2-4).

We appreciate the inclusion of a section in the DEIS addressing noxious weed infestation risks and control measures (pages 3-69 to 3-85). We support integrated weed management and conduct of weed control measures at the earliest stage of invasion to reduce impacts to native plant communities (e.g., effective mix of cultural, education and prevention, biological, mechanical, chemical management, etc.). We believe prevention of weed invasions is the cheapest and best way to control weeds, and minimization of ground disturbance and quickly revegetating disturbed ground is the best way to avoid weed invasions. All sites with disturbed soils such as landings, skid trails, and along roads should be seeded with weed-free native grass seed. We also encourage tracking of weed infestations, control actions, and effectiveness of control actions in a Forest-level weed database.

We also courage prioritization of management techniques that focus on non-chemical treatments first, with reliance on chemicals (herbicides) being the last resort. It is important to recognize that herbicides can be toxic and have the potential to be transported to surface or ground water following application, so there is a need to use such chemicals in a safe manner that ensures protection of surface water ecological integrity, and worker and public health and safety. Herbicide drift into streams and wetlands could adversely affect aquatic life and wetland functions such as food chain support and habitat for wetland species. No spraying should occur in or near streams, wetlands or other aquatic areas. All efforts should be made to avoid movement or transport of herbicides into surface waters that could adversely affect fisheries or other water uses. Appropriate mitigation measures should be incorporated into applications of herbicides to mitigate risks of adverse health and environmental effects (e.g., measures such as adequate streamside buffers, mechanical weed removal in sensitive areas, flagging sensitive areas on the ground, spray nozzles that produce larger droplets to reduce drift, wind monitoring, herbicide monitoring, etc.).

For your information, the website for EPA information regarding pesticides and herbicides is http://www.epa.gov/pesticides/ . The National Pesticide Telecommunication Network (NPTN) website at http://nptn.orst.edu/tech.htm which operates under a cooperative agreement with EPA and Oregon State University and has a wealth of information on toxicity, mobility, environmental fate on pesticides that may be helpful (phone number 800-858-7378). Measures that we often recommend for preventing spread of weeds from source areas to uninfested areas include:

Ensure that equipment tracks and tires are cleaned prior to transportation to an uninfested site.

Focus control efforts at trail heads and transportation corridors to prevent tracking of seed into uninfested areas.

Attempt to control the spread from one watershed to another to reduce water as a transport vector.

If a localized infestation exists and control is not a viable option, consider rerouting trails or roads around the infestation to reduce available vectors for spread.

Establish an education program for industrial and recreational users and encourage voluntary assistance in both prevention and control activities.

Reseed disturbed sites as soon as possible following disturbance.

We also note that hay can be a source of noxious weed seed. Hay/straw is used as mulch to slow erosion and encourage seed germination, and used to feed horses in hunting and recreation camps, and as wildlife feed during harsh winters. The Federal Noxious Weed Act of 1974 prohibits the interstate transport of noxious weeds or weed parts, such as seed. Montana has a weed free certification program for hay. It would be helpful to assure that certified weed free hay is used. Cattle that are released on grazing allotments or horses used on public lands can transport undigested weed seed and spread it in their manure. Another option for preventing the introduction of noxious weeds it to require cattle and horses, especially those coming from areas with noxious weeds, to be penned and fed weed free hay for several days prior to being released on public lands.

Wildlife

17) We are pleased that the minimum numbers of snags, snag replacement trees, and downed wood as specified in Amendment 21 of the Flathead Forest Plan would be met or exceeded under all alternatives, and that measures are included to provide for snag and downed wood habitat needs as well as living tree canopy and large trees (page 2-6). We are also pleased that the largest larch and Douglas fir and most live trees would be retained by the prescription of minimum retention diameters (page 3-210), and areas with existing or recruitment old growth would not be entered for timber salvage (page 3-229).

The DEIS, however, appears to include some inconsistent statements in regard to old growth harvest. For example, it is stated at the bottom of the last full paragraph on page 3-229 that "no salvage would occur in areas found during 2008 surveys to be old growth or recruitment old growth, or where this is still uncertain at the time of unit layout or where this is uncertain would not be harvested." Yet in the first paragraph on that page it is stated that, "considerable amount of salvage would occur in areas where old growth values are currently uncertain, and this is particularly true in Alternative D." Also, an attribute of Alternative C is that it proposes no salvage harvest in old growth or possible recruitment old growth (page 2-18), which implies that the other action alternatives propose some salvage harvest in old growth or possible recruitment old growth. We recommend that the extent of proposed salvage harvest in old growth or possible recruitment old growth or areas of old growth uncertainty be clarified for all alternatives in the FEIS.

We support protection of old growth habitats and maintenance or restoration of native, late-seral overstory trees and forest composition and structure within ranges of historic natural variability as much as possible. Old growth tree stands are ecologically diverse and provide good breeding and feeding habitat for many bird and animal species, which have a preference or dependence on old growth (e.g., barred owl, great gray owl, pileated woodpecker). Much old growth habitat has already been lost, and we believe it is important that management direction prevent continued loss of this habitat and promote long-term sustainability of old growth stands, and restore where possible the geographic extent and connectivity of old

growth.

18) We are concerned that the DEIS states that under Alternatives B and D snag and downed wood habitat would be "appreciably reduced" (page 3-213), and that this would be "less optimal" for numerous wildlife species (page 3-214). We are concerned about potential adverse impacts to wildlife associated with the appreciable loss of snags and downed wood habitat with Alternatives B and D, particularly to wildlife species such as the black-backed woodpecker and pilleated woodpecker that use snag and cavity habitat. Additional adverse impacts to numerous wildlife species that may occur with Alternatives B and D provides additional reasoning for our preference to select Alternative C as the preferred alternative. We also recommend that the wildlife biologist review the salvage harvest areas to ensure that high quality, large diameter snags are protected, as well as trees with nesting birds.

19) The DEIS states that the Sheppard Creek project area comprises three Lynx Analysis Units (page 3-258), and Table 3-80 appears to show that some lynx habitat would be converted to unsuitable habitat by the proposed activities. It also appears that Alternatives B and D include road construction through lynx habitat (page 3-260). We did not see a statement indicating that the proposed harvests and road construction activities would be consistent with the objectives, standards and guidelines in the Northern Rockies Lynx Amendment. We also did not see a Biological Assessment identifying the anticipated level of effects to threatened or endangered (T&E) species under the Endangered Species Act (ESA). The FEIS should identify the status of proposed activities in regard to consistency with the Northern Rockies Lynx Amendment, as well as include a Biological Assessment identifying the anticipated level of effects under ESA for all threatened or endangered species (e.g., grizzly bear, lynx, gray wolf, bull trout).

If it is determined that the finally selected project alternative could adversely affect any T&E species the final EIS should include the Biological Assessment and associated U.S. Fish & Wildlife Service (USFWS) Biological Opinion or formal concurrence for the following reasons:

> (1) NEPA requires public involvement and full disclosure of all issues upon which a decision is to be made;
> (2) The CEQ Regulations for Implementing the Procedural Provisions of NEPA strongly encourage the integration of NEPA requirements with other environmental review and consultation requirements so that all such procedures run concurrently rather than consecutively (40 CFR 1500.2(c) and 1502.25); and
> (3) The Endangered Species Act (ESA) consultation process can result in the identification of reasonable and prudent alternatives to preclude jeopardy, and mandated reasonable and prudent measures to reduce incidental take. These can affect project implementation.

Since the Biological Assessment and EIS must evaluate the potential impacts on listed species, they can jointly assist in analyzing the effectiveness of alternatives and mitigation measures. EPA recommends that the final EIS and Record of Decision not be completed prior to the completion of ESA consultation. If the consultation process is treated as a

separate process, the Agencies risk USFWS identification of additional significant impacts, new mitigation measures, or changes to the preferred alternative. If these changes have not been evaluated in the final EIS, a supplement to the EIS would be warranted.

Air Quality

20) The DEIS states that slash pile burning at landings is the only burning that is proposed (page 2-5). As you know smoke from fire contains air pollutants, including tiny particulates (PM_{10} and $PM_{2.5}$) which can cause health problems, especially for people suffering from respiratory illnesses such as asthma or emphysema, or heart problems. Particulate concentrations that exceed health standards have been measured downwind from prescribed burns. In addition, as stated in the DEIS (page 3-118) prescribed fire could have impacts on non-attainment areas (e.g., Whitefish, Columbia Falls, and Kalispell), and Federally-designated Class I areas (e.g., Bob Marshall and Great Bear Wilderness Areas and Glacier National Park), and smoke can reduce visibility and diminish the appreciation of scenic vistas.

We are pleased that a burn plan will be prepared for each burn, and that burning will be conducted in coordination with the Montana/Idaho Airshed Group (page 2-3). Conduct of prescribed burning in accordance with certified State Smoke Management Plans such as the Montana/Idaho Airshed Group is consistent with the *EPA Interim Air Quality Policy on Wildland and Prescribed Fire* (i.e., scheduling burning during periods of favorable meteorological conditions for smoke dispersal). This Policy can be found at: http://www.epa.gov/ttn/oarpg/t1/memoranda/firefnl.pdf . It may be of interest to the public to display the website for the Montana/Idaho State Airshed Group in the FEIS, http://www.smokemu.org .

We appreciate the analysis and disclosure of potential air quality effects of the proposed pile burning, including Table 3-33 (page 3-120) showing estimated PM 2.5 emissions, and the conclusion that there would no detrimental effects to areas of concern, although burning, road dust, vehicle emissions and wildfire could adversely affect air quality temporarily (page 3-121). It is important to acknowledge such temporary air quality impacts, since despite best efforts to predict favorable conditions the weather can change preventing smoke and other air pollutants from dispersing quickly. This can be especially problematic for smoldering pile burns when a period of poor ventilation follows a good ventilation day. Smoke from burning often collects in valley bottom areas for a short time following burning.

We recommend that if there is potential for smoke to drift into populated areas there should be public notification prior to burns. We suggest that notices be placed in the local newspaper at the beginning of each burn season, and additional efforts be made to contact any residents near burns by telephone to make them aware of burns and potential air quality impacts. This will help sensitive people (e.g., people suffering from respiratory illnesses such as asthma or emphysema, or heart problems) to plan accordingly.